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BEFORE THE

Federal Communications Commission

WASHINGTON, D.C. 20554

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In the Matter of	)	
	)	
Amendment of Parts 2, 15, and 97 of the	)	ET Docket No. 94-124
Commission's Rules to Permit Use of	)	RM-8308
Radio Frequencies Above 40 GHz for	)	
New Radio Applications	)	
	)	
International Harmonization of Frequency	)	
Bands Above 40 GHz	)	
	)	
Petition of Sky Station International, Inc.,	)	
For Amendment of the Commission's	)	
Rules To Establish Requirements for a	)	
Global Stratospheric Telecommunications	)	
Service in the 47.2-47.5 and	)	
47.9-48.2 Frequency Bands	)	

To: The Commission

JOINT REPLY TO OPPOSITION TO PETITION FOR RECONSIDERATION

GE American Communications, Inc., Hughes Communications, Inc., Motorola Satellite Systems, Inc. and TRW Inc. ("Petitioners"), by their counsel, hereby reply jointly to the "Opposition to Petition for Reconsideration" filed by Sky Station International, Inc. ("Sky Station") in the above-captioned proceedings.[1/] In their Petition for Reconsideration, the Petitioners took issue with the Commission's premature and unsupported decision that "the dominant use" of the spectrum at 47.2 - 48.2 GHz ("47 GHz band") is "likely to be a fixed, point-to-multipoint service that employs stratospheric platforms at fixed locations," and that one gigahertz of channelized spectrum is necessary and appropriate to implement such a service.

1/ Reconsideration was sought with respect to the Commission's Second Report & Order in which it adopted rules and policies relating to the licensed commercial use of the 47.2 - 48.2 GHz frequency band. *See* Second Report & Order, FCC 97-153, slip op. (released July 21, 1997) ("Second R&O").

Sky Station's Opposition to the relief requested by Petitioners is largely non-responsive to these arguments, focusing instead on the putative advantages of and demand for its proposed Global Stratospheric Telecommunications Service ("GSTS") generally, and not on the specific issue of the appropriate bands and bandwidth for such a service as designated by the Second R&O. As requested in the Petition, because of the demand for access to the existing global satellite uplink frequency allocation at 47 GHz, the Commission should reconsider its decision to segment this spectrum for GSTS in a manner that would limit or preclude use of this spectrum for satellite services that are national, regional or global in scope.

DISCUSSION

1. The Commission's Presumption That A GSTS-Type Service Will Be The Likely Dominant Spectrum Use At 47 GHz Is Unsupported By The Record.

Sky Station has simply failed to address the legal arguments advanced by the Petitioners. The bulk of Sky Station's Opposition is devoted instead to a defense of the utility of and general interest in its proposed GSTS technology. *See* Opposition at 2-9. While Sky Station may have reason to be defensive on these points, given the unproven and still unsettled nature of its technology, these were not issues raised in the Petition for Reconsideration.[2/] Instead, the Petition focused on the Commission's suspect conclusion that a fixed service using platforms held aloft by dirigibles would be the most likely dominant spectrum use at 47 GHz, and that it would be appropriate to set aside one gigahertz of spectrum based on this notion.[3/]

2/ In any case, Sky Station's superfluous efficiency analysis does not appropriately apply the Spectrum Utilization Efficiency formula. Specifically, its approach undervalues the ability of a single GSO satellite to provide ubiquitous service to approximately one-third of the earth's surface, including suburban and rural areas, via a single frequency band. Similar coverage via Sky Station type systems would require countless stratospheric platforms. These types of trade-offs should have been considered in the Second R&O, but were not.

3/ Sky Station's assertion that the Petitioners' real target is the service rules for the 47 GHz band (*see* Opposition at 14) is incorrect. The defect in the Second R&O is its premature identification of specific spectrum at 47.2-48.2 GHz for GSTS, and its adoption of a licensing framework specifically geared to this service.

Even if the Commission's decision to premise a spectrum allocation on the "likely dominant use" were legally sound, it is difficult to discern what in the record in this proceeding could have prompted it to reach its conclusion with respect to GSTS at 47 GHz. As indicated in the Above 36 GHz Notice, Sky Station's was not the only system proposal before the Commission at the time the Second R&O was adopted.[4/] Motorola's September 1996 application to construct the M-Star satellite system demonstrated the interest of a recognized satellite industry player in implementing a next generation FSS system in these bands. Before the Commission adopted the Second R&O, it had announced its intention to open a filing window for satellite applications using bands (including 47 GHz) in the 36-51 GHz range. Subsequently, applications to construct satellite systems employing these frequencies were also filed by Hughes, TRW, GE Americom, and nearly one dozen additional filers.

Long before any of the satellite system proposals were submitted, however, some of these same entities had filed comments with the Commission emphasizing the special importance of the existing global satellite allocation at 47 GHz for satellite system use.[5/] Much of the technology necessary to implement these new systems has already been proven, either in other frequency bands or through the U.S. military's pioneering use of the "V-band" for satellite services. Moreover, a majority of the applicants are established satellite manufacturers and system operators, some of which currently provide satellite services in bands that are already congested with existing satellite systems that provide essential services to a wide-ranging customer base. In order for these operators to expand in the future to meet the expected high demand for satellite capacity and to satisfy the ever increasing demand for access to broadband spectrum, suitable additional frequencies will be required.[6/]

4/ *See* Above 36 GHz NPRM, FCC 97-85, slip op. at ¶6 (released March 24, 1997).

5/ *See, e.g.*, Motorola Reply Comments at 3 (filed March 1, 1995).

6/ Sky Station's *ad hominem* recitation of examples of Petitioners' "history" of failing to implement systems is both utterly irrelevant and factually incorrect. Rather than taking time to correct the multiple inaccuracies, Petitioners simply note that the billions of dollars invested in operating satellite systems, which provide many essential services, are a strong

(continued...)

By contrast, Sky Station is a hitherto unknown entity that is the lone proponent for an untested system concept that it asserts to be generally incapable of sharing spectrum with either terrestrial services or satellite systems. In view of the preclusive nature of the proposed GSTS, it is incumbent upon the Commission at least to inquire whether some lesser amount of spectrum, at 47 GHz or in another band,[7/] would suffice to meet the claimed spectrum demand.[8/]

In short, the Commission's finding that the GSTS service model is more likely to be the dominant use of the 47 GHz band than FSS systems is wholly arbitrary and contrary to the weight of the evidence before the agency. The Commission has failed to explain why it credited the Sky Station proposal as representative of the likely future use of the band while effectively ignoring multiple applications from established satellite entities. It compounded its error by inexplicably deciding to allocate one gigahertz of spectrum to such a service when Sky Station (the only entity even expressing an interest in offering GSTS during the course of this three year proceeding) could by its own admission be accommodated in less than a quarter of this bandwidth.

[6/](...continued)
testament to the track record of the satellite industry.

[7/] In the as yet unconsidered comments filed in response to the Above 36 GHz NPRM, it was suggested that a GSTS-type service could be accommodated at 51.2-52.2 GHz, where there is no conflicting satellite allocation. *See* Motorola Comments, IB Docket No. 97-95, at 9 (filed May 5, 1997); TRW Reply Comments, IB Docket No. 97-95, at 9 n.13 (filed June 3, 1997). Indeed, Sky Station itself has indicated that its proposed service is not particularly frequency band sensitive. See Petition at 9 n.31; Further Comments of Sky Station at 2 (Filed December 24, 1996).

[8/] Indeed, in its Opposition, Sky Station, modifying its earlier statement (Sky Station Reply Comments, ET Docket No. 94-124, at 8 (filed May 16, 1996)) that it could conduct operations with as little as twenty megahertz total bandwidth in two ten megahertz bands ("10+10"), states its own estimate that it requires only 100 MHz of spectrum in each direction to meet its initial needs. Opposition at 15-16. Sky Station's prior contention that 600 MHz (300+300) "is needed to satisfy global demand" was based on the expectation that there would be intersystem sharing among multiple GSTS licensees, and thus is unsupported by the evidence currently available in the form of Sky Station's single GSTS proposal. See Sky Station Reply Comments, ET Docket No 94-124, at 8 (filed May 16, 1996).

2. The Petitioners' Goal Is Not Exclusion of GSTS But A Comprehensive and Forward-Looking Approach To Spectrum Management Based On The Legitimate Spectrum Needs Of All Services Vying For Allocations Above 36 GHz.

Sky Station also assails the Petitioners for seeking access to the 47 GHz band (and exclusion of GSTS from this band) when the satellite industry has existing access to frequencies in other bands. *See* Opposition at 10-11. As noted above, this argument is misplaced in that successful operational technologies need room to grow and evolve as least as much as unproven new technologies require spectrum to test their viability. The Petitioners' point is simply that sound spectrum management requires a balancing of these needs in order to ensure the efficient allocation of adequate bandwidth to both operational and more speculative services.

Indeed, the advantage of having a proposed comprehensive band plan in IB Docket No. 97-95 as the basis for a rulemaking is precisely that competing needs may be balanced against each other to effect a solution that accommodates all spectrum users to the greatest extent possible. The advantages of this approach will be lost if the Commission allocates spectrum on a piecemeal basis without considering the preclusive impact of earmarking frequencies for one type of service on other possible uses. Under these circumstances, an unsubstantiated finding that a particular service model will be the "dominant use" of spectrum may be a self-fulfilling prophecy or, worse yet, a consignment of the same and perhaps additional spectrum to long-term disuse.[9/]

In the case of the 47 GHz band, there are particularly compelling reasons for the Commission to avoid taking any action that would preclude satellite use of the frequencies between 47.2 - 48.2 GHz. This band is part of a global, primary spectrum allocation for Fixed-Satellite Service uplinks at 47.2-50.2 GHz, and many of the companies seeking to use these bands are intending to provide a truly

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9/ Even in instances where the Commission has followed more regularized allocation procedures, it has sometimes fallen victim to the allure of unproven new technologies touted by entrepreneurial companies, *e.g.*, the Interactive Video and Data Service. *See* Mike Mills, "Interactive TV Dream Fades for Licensees: Some Say FCC Hyped Unproven Technology," *Washington Post*, at A1 (February 17, 1997). Like IVDS, Sky Station's GSTS is a service concept promoted almost entirely by a single, start-up venture.

global service.[10/] As the Commission is aware, once spectrum designated by the ITU for satellite services is rendered unusable through allocations to other services, it is very difficult, as a practical matter, to secure replacement satellite allocations in nearby bands that can be made available on a global basis.

In contrast, GSTS platforms, because of their geostationary character and substantially lower altitudes, seem to be more suited to local area-wide services. For this reason, there is no acute need for a global GSTS allocation on identical frequencies as there is for FSS. The possible benefit of global equipment standardization pales in comparison to the vital need for global satellite systems to be able to function without harmful interference throughout their service areas. Although Sky Station has identified this spectrum as suitable for its use, it has not demonstrated that such spectrum is uniquely suited for its purposes.[11/]

3. The Commission's Licensing Mechanism Is Inconsistent With Its Determination To Permit All Types Of Services At 47 GHz.

In its Opposition, Sky Station counsels the Commission that the Petitioners' concerns with the licensing framework "can be readily dismissed." Opposition at 14. Once again, however, Sky Station's arguments miss the mark. The Commission's decision to channelize the spectrum into 100 MHz allotments is inherently inconsistent with its declarations elsewhere "that all identified uses of the 47 GHz band may be valuable and should be permitted," and that it "should not limit the types of services that can be offered in the band."[12/] Rather than maintaining all permitted uses of the 47 GHz band, the Commission appears to rely on the Above 36 GHz NPRM (upon which comments had not

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10/ Contrary to Sky Station's description of the 47.2 - 48.2 GHz band as merely 7% of the V-band spectrum, this spectrum band represents fully one-third of the available uplink spectrum for commercial satellite systems in the V-band.

11/ This situation is in no way altered by Sky Station's asserted "global consensus" with respect to "stratospheric use of the 47 GHz band." Opposition at 11-12. The various expressions of support for this allocation cited do not represent a groundswell of interest by others in implementing GSTS technology, but are instead mere indications of Sky Station's efforts to promote itself.

12/ Second R&O at ¶ 63.

even been filed at the time that the Second R&O was adopted) to support a contradictory conclusion that the 47 GHz band should be designated for wireless terrestrial services, and that a particular subcategory of such services -- *i.e.*, "a fixed, point-to-multipoint service that employs stratospheric platforms at fixed locations" -- is likely to be the dominant spectrum use in the 47 GHz band.[13/] It is this suspect determination upon which the Commission has, in turn, based its decision to license spectrum in paired 100 MHz channel blocks.[14/]

In effect, the Commission appears to have adopted via a licensing mechanism the allocation proposal advanced for the first time in IB Docket No. 97-95.[15/] This is so because a system of discrete area-wide licenses based on 100 MHz spectrum blocks is uniquely suited for terrestrial wireless services and unworkable for satellite services, an issue upon which the Second R&O is entirely silent. A decision at this juncture to divide spectrum into "area wide" channel blocks for purposes of auction is thus inconsistent with the determination professed elsewhere in the Commission's decision not to limit the types of services that can be offered in the 47 GHz band.[16/]

13/ *See, e.g., id.* at ¶ 5 & n.8, ¶¶ 19 and 69.

14/ *Id.* at ¶¶ 78-79.

15/ The Commission incorrectly states in the Second R&O that the Above 36 GHz Notice, "where [it] designated the [47 GHz] band for predominantly wireless terrestrial services," did not propose any changes for this band, when, in fact, no specific designation of services in the 47 GHz band had been proposed prior to that time. The Above 36 GHz Notice was and is merely a proposal — and one that has drawn nearly unanimous fire from all quarters of the satellite industry. Second R&O at ¶19.

16/ *See* Second R&O at ¶ 63. In this connection, it should be noted that the Commission is barred by the Communications Act from deferring spectrum allocation to the marketplace. *See* 47 U.S.C. § 309(j)(6)(A)&(E) (Commission authority to use competitive bidding to assign licenses does not "alter spectrum allocation criteria and procedures established by other provisions of this Act"). While the Commission can allow wide latitude to licensees to offer a range of services in bands allocated, for example, to FSS or terrestrial fixed use (allowing individual companies to gauge the value of the spectrum for a specific business model), it cannot abdicate its essential policymaking function by selling the prerogative to determine the primary use of spectrum to the highest bidder.

4. The Commission Improperly Adopted Sky Station's Spectrum Proposal Without Affording Other Interested Parties An Opportunity To Comment.

Finally, Sky Station also fails to come to grips with the major procedural infirmity of the Second R&O — the fact that the Sky Station proposal adopted by the Commission was submitted "after the comment period to the First NPRM closed and raise[s] issues not addressed in our proposals" upon which the other parties had no opportunity to comment.[17/] Despite the fact that the Commission made Sky Station's *ex parte* post-pleading-cycle filings the basis for its final action in this docket, Sky Station focuses solely on well-recognized principles that the Commission may accept late-filed comments and may depart from its initial rulemaking proposal in crafting final rules. *See* Opposition at 16. Both of these principles, however, presuppose that other parties have an opportunity to address alternatives presented to the Commission, and that any final rule is a "logical outgrowth" of proposals actually vetted before the Commission through the notice and comment process. This is not what happened in the 47 GHz proceeding.

In the 47 GHz proceeding, the Commission accepted late-filed *ex parte* comments from Sky Station and made them a critical justification for its decision,[18/] ***despite the fact that other parties to the proceeding were neither informed of this late filing nor given the opportunity to comment upon the significant new proposal it advanced***. In its "Further Comments," Sky Station asserted for the first time that its proposal, originally filed as a separate petition for rulemaking, should instead be treated as additional comments in ET Docket No. 94-124, eliminating the need for the separate rulemaking it originally sought.[19/] Specifically, Sky Station abandoned its characterization of GSTS as a "new service," claimed that its proposed stratospheric operations would constitute terrestrial fixed services, and contended that the Commission should adopt its proposal on the record already

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17/ Second R&O at ¶ 20.

18/ *See* Second R&O at ¶ 32.

19/ *See* Sky Station Further Comments, ET Docket No. 94-124, RM-8784 (filed December 24, 1996). For the Commission's convenience, a copy of this *ex parte* filing is attached hereto.

established.[20] It further asserted that the service would require a total of 600 MHz, "for which fixed satellite services should not be eligible."[21] Although these "Further Comments" were filed outside of any comment window set in the various NPRMs and public notices released by the Commission, no additional comment was sought concerning its new arguments.

Proper "notice and comment" rulemaking requires that interested parties be given both "notice" of the alternatives being actively considered by an agency and a meaningful opportunity to "comment" on these alternative courses of action.[22] Precedent cited by Sky Station itself makes clear that the Commission must not give consideration to late-filed comments when other interested parties have had no opportunity to respond to such submissions.[23] Indeed, the judicial branch has explicitly emphasized the need for full disclosure of all views submitted in rulemaking proceedings for the purpose of eliciting "adversarial comment."[24] Moreover, even when comments are timely submitted, an agency may not rely on such submissions as providing notice of a significant alternative option not addressed in an NPRM.[25]

20/ *See id.* at 3.

21/ *See id* at 2 & 5-6.

22/ *See also* 47 C.F.R. § 1.407. It is also clear that an agency may not rely on a newly-proposed rule or policy to bootstrap action in a separate proceeding in which the new proposal was not addressed. Thus, the Commission's apparent reliance on its Above 36 GHz band plan to support its action in the Second R&O is unfounded. See Second R&O at ¶5 n. 8 and ¶19.

23/ *See* WATS-Related and Other Amendments of Part 69 of the Commission's Rules, 59 R.R.2d 1418, 1445 fn.154 (1986) (Denying a motion to accept late-filed comments "because the filing was submitted two weeks after the close of the comment cycle (and one day before the Sunshine Agenda Notice announcing consideration of this Order) and we were therefore *unable to receive and consider responses to it from other interested parties*") (emphasis added).

24/ Home Box Office, Inc. v. FCC, 567 F.2d 9, 55 (D.C. Cir. 1977).

25/ *See e.g.* National Black Media Coalition v. FCC, 791 F.2d 1016, 1023 (2d Cir. 1986), *citing* AFL-CIO v. Donovan, 757 F.2d 330, 340 (D.C. Cir. 1985)

In its Opposition, Sky Station ignores the fact that its "Further Comments" were submitted on an *ex parte* basis outside the Commission's comment cycle.[26/] Sky Station simply submitted its supplemental pleading without either making a motion to the Commission for authority to submit late-filed comments, or complying with the agency's rules with respect to written *ex parte* presentations in non-restricted proceedings.[27/] Moreover, other commenters in the 47 GHz proceeding were not served with the "Further Comments" nor, due in part to Sky Station's failure to observe the *ex parte* rules, was any Public Notice issued to inform all interested parties that a new written *ex parte* presentation had been submitted in ET Docket No. 94-124.

Under these circumstances, there was no opportunity for the Commission "to receive and consider responses . . . from other interested parties," as is required under the APA and the Commission's rules and precedent.[28/] Accordingly, the Commission's Second R&O based on Sky Station's *ex parte* submission should be vacated.

CONCLUSION

Based on the Petition for Reconsideration, as supplemented by the foregoing discussion, and on Sky Station's fundamental failure to address Petitioners' legal arguments, the Commission should vacate its instant decision to adopt licensing procedures for the 47 GHz band, terminate this docket, and pursue adoption of a unified omnibus spectrum plan in IB Docket No. 97-95.

26/ Under FCC rules, post-reply comments may be filed only when "specifically requested or authorized by the Commission. 47 C.F.R. § 1.415(d).

27/ *See* 47 C.F.R. § 1.1206(a)(1) (written *ex parte* submissions "must be labeled or captioned as an *ex parte* presentation.")

28/ Contrary to Sky Station's inference (*see* Opposition at 17), the fact that four months elapsed between Sky Station's *ex parte* filing and the Commission's issuance of the Second R&O is not relevant given the fact that other commenters had no basis to know that a major new proposal had been submitted to the Commission.

Respectfully submitted,

GE AMERICAN COMMUNICATIONS, INC.

By: _____

Peter A. Rohrbach
Karis A. Hastings

Hogan & Hartson, L.L.P.
555 Thirteenth Street, N.W.
Washington, D.C. 20004
(202) 637-5600

HUGHES COMMUNICATIONS, INC.

By: _____

Gary M. Epstein
John P. Janka
Arthur S. Landerholm

Latham & Watkins
1001 Pennsylvania Avenue, N.W.
Suite 1300
Washington, D.C. 20004
(202) 637-2200

MOTOROLA SATELLITE SYSTEMS, INC.

By: _____

Philip L. Malet
Brent H. Weingardt

Steptoe & Johnson, L.L.P.
1330 Connecticut Avenue, N.W.
Washington, D.C. 20036
(202) 429-3000

TRW INC.

By: _____

Norman P. Leventhal
Stephen D. Baruch
David S. Keir

Leventhal, Senter & Lerman, P.L.L.C.
2000 K Street, N.W.
Suite 600
Washington, D.C. 20006
(202) 429-8970

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Before the
FEDERAL COMMUNICATIONS COMMISSION
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In the Matter of Amendment of Parts 2 and 15 of the Commission's Rules to Permit Use of Radio Frequencies Above 40 GHz for New Radio Applications	)	ET Docket No. 94-124
Petition of Sky Station International, Inc. for Amendment of the Commission's Rules to Establish Requirements for a Global Stratospheric Telecommunications Service in the 47.2-47.5 GHz and 47.9-48.2 GHz Frequency Bands	)	RM-8784

FURTHER COMMENTS OF SKY STATION INTERNATIONAL, INC.

Martine Rothblatt
Paul A. Mahon
Christopher Patusky
Mahon & Patusky, Chartered
1735 Connecticut Avenue, N.W.
Washington, D.C. 20009
(202) 483-4000

Jonathan D. Blake
Gerard J. Waldron
Lee J. Tiedrich
Covington & Burling
1201 Pennsylvania Ave., N.W.
P.O. Box 7566
Washington, D.C. 20044-7566
(202) 662-6000

Attorneys for Sky Station International, Inc.

December 24, 1996

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Before the
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In the Matter of Amendment of Parts 2 and 15 of the Commission's Rules to Permit Use of Radio Frequencies Above 40 GHz for New Radio Applications	)	ET Docket No. 94-124
Petition of Sky Station International, Inc. for Amendment of the Commission's Rules to Establish Requirements for a Global Stratospheric Telecommunications Service in the 47.2-47.5 GHz and 47.9-48.2 GHz Frequency Bands	)	RM-8784

FURTHER COMMENTS OF
SKY STATION INTERNATIONAL, INC.

On March 20, 1996, Sky Station International, Inc. ("Sky Station"), filed Additional Comments[1/] in this proceeding; 34 parties then filed comments in response,

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1/ The full title was "Request to Establish New GSTS Service, Additional Comments and Petition for Rulemaking." For reasons explained below, the first and third components of that heading can be mooted by the Commission's taking the action requested in this pleading.

At the same time, Sky Station submitted a preliminary Application as a placeholder for and illustration of the service it could provide. Because of the adjustments recommended in these Further Comments, Sky Station asks that the Commission hold that Application in abeyance at least until it acts in this proceeding and Sky Station has an adequate opportunity to amend it accordingly.

all but three supportive; and on May 16, Sky Station filed Reply Comments. Much has transpired since then on many fronts: scientific, business, international and regulatory. These developments have caused us to adjust the proposed regulatory framework for the stratospheric service that Sky Station seeks to offer the public. These Further Comments describe these fine-tunings and the reasons they are appropriate. What has not changed, indeed has been enhanced and made even clearer, is the splendid opportunity provided by this Millimeter Wave Proceeding[2/] promptly to facilitate realization of the public benefits of Sky Station's proposed service.

SUMMARY: REQUESTED ACTION

Since filing its Additional Comments and Reply Comments, Sky Station has worked vigorously and effectively, with the Commission's assistance, to achieve suitable accommodations in the WRC '97 process for its proposed service. Its experience in this complex and vital arena of regulatory activity convinces Sky Station that (1) its proposed operations constitute fixed services; (2) stratospheric fixed service requires a total of 600 MHz, for which fixed satellite services should not be eligible; (3) each operator requires a segmented frequency pair of 100 MHz bands; and (4) the paired frequency bands should be separated by at least 500 MHz. Sky Station's preference is that the 300 MHz plus 300 MHz allocation for stratospheric fixed service come from the 47.2-48.2 GHz band, although the spectrum boundaries could be somewhat higher or lower.

2/ The Millimeter Wave Proceeding refers to the above-captioned ET Docket No. 94-124.

Further, in contrast to Sky Station's earlier position, this allocation need not be made to a new and special global stratospheric telecommunications service, apart from other fixed service millimeter wave uses. A generic terrestrial flexible fixed (non-satellite) service allocation will suffice -- which means that Sky Station would have to compete with other aspiring fixed (non-satellite) users in auctions for this spectrum. In that regard, Sky Station endorses the Commission's proposal, see Millimeter Wave NPRM[3/] at paras. 25-27, to use auctions to assign licenses in this proceeding. Multiple round auctions of national or super-regional licenses for terrestrial flexible fixed services would be consistent with the record in this proceeding and would advance the goal of efficient licensing.

The Commission can and should make the foregoing decisions by the end of February in a Second Report and Order in the Millimeter Wave Proceeding ("Second Report and Order"). The necessary predicate has already been laid in this proceeding, as reflected in the record. Moreover, Sky Station's proposed operations fit quite well within the service rules of Part 101 of the Commission's Rules. To the extent that Part 101 does not perfectly fit Sky Station's planned operations, existing rules can be readily adapted in the Second Report and Order by rule change or blanket waivers. Such a course is fully consistent with the Commission's commitment to flexibility, which it has demonstrated in various contexts by adjusting service definitions, service rules and technical requirements to embrace more advanced uses of the spectrum.

3/ Amendment of Part 2 and 15 of the Commission's Rules to Permit Use of Radio Frequencies Above 40 GHz for New Radio Applications, 9 FCC Rcd. 7078, 7083 (1994).

If, however, the Commission believes that it must create new service rules for this service, rather than adapt existing Part 101 for this purpose,[4/] it should also by February launch a new notice of proposed rulemaking, prosecute it expeditiously and conclude it early enough in 1997 so that auctions may be conducted prior to WRC '97, which begins in late October 1997. Timing is tremendously important because of the inexorable WRC '97 schedule and the understandable insistence of the capital markets on certainty and specificity.[5/]

I. BASIC ALLOCATION, CHANNELIZATION, AND LICENSING ISSUES

Spectrum allocation. The Second Report and Order should allocate the 47.2-48.2 GHz band for fixed (non-satellite) services, including stratospheric services, since this band is ripe for Commission decision. In the Millimeter Wave NPRM, the Commission solicited comments on proposed uses for the 47.2-48.2 GHz and other bands. Specifically, it proposed to allocate the 47.2-47.4 GHz band for unlicensed vehicular radar use and the 47.4-48.2 GHz band for the Licensed Millimeter Wave Service ("LMWS"). In December 1995, the Commission adopted its First Report and Order in the Millimeter Wave Proceeding, which declined to allocate the 47.2-47.4 GHz band for

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4/ The Commission could also, under Part 101, create an "all-others" flexible or general millimeter wave service (non-satellite) category under the Part 101 generic category.

5/ While Sky Station has adequate financial resources for the present time, the economic burdens of auctions, deployment, and initial operation will require it to raise additional financial resources.

vehicular radar, electing the 46.7-46.9 GHz band instead.[6] As a consequence, the Commission should now allocate the entire 47.2-48.2 GHz band to the LMWS service, and particularly for fixed services (non-satellite). The Commission can allocate this band now because it is ripe for decision and not subject to serious dispute, even though other bands of the spectrum that are also the subject of this proceeding may need additional study and review.

Band segmentation. The Commission initially proposed to define LMWS to include any type of service permitted in the table of allocations. See Millimeter Wave NPRM at para. 21. It did this because, at the time, there was very little information on the highest use for this spectrum. The record that has subsequently been developed provides additional information demonstrating that in these bands these potential uses -- mainly ubiquitous fixed and fixed satellite services -- cannot share with each other.[7] As a consequence, effective spectrum management calls for band segmentation.

Also, at the time the Commission issued the Millimeter Wave NPRM, it proposed to model the LMWS service after LMDS, a fixed service in the 28 GHz band, though the spectrum allocation issues in the 28 GHz band had not yet been resolved. The Commission has since decided in the 28 GHz proceeding that fixed services and satellite

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[6] Amendment of Parts 2, 15 and 97 of the Commission's Rules to Permit Use of Radio Frequencies Above 40 GHz for New Radio Applications, 11 FCC Rcd. 4481, 4487 (1995).

[7] See Sky Station's Reply Comments at 6-7 (May 16, 1996); see also Application of Motorola Satellite Systems, Inc. for Authority to Construct, Launch and Operate the M-Star System at 71 (Sept. 4, 1996) (in areas of high density of use, "coordination in these bands between the Fixed Service and the M-Star System may not be possible").

services generally cannot share spectrum.[8/] The same conclusion applies to the spectrum at issue in the Millimeter Wave Proceeding.[9/]

Channelization. Sky Station's Additional Comments, filed nine months ago, stated that there would need to be channelization. Therefore, this issue is within the scope of the Millimeter Wave NPRM and no further notice or new proceeding is necessary. Accordingly, in the Second Report and Order, the Commission can and should pair 100 plus 100 MHz bands in the 47.2 to 48.2 GHz band, with a separation of at least 500 MHz, though not all of this spectrum block need be channelized.

Service areas and other licensing issues. The Commission originally proposed to license the LMWS service based on MTAs. Id. at para. 24. Nine months ago Sky Station proposed a global service. Now it has become clear that national systems are likely to be developed in the 47.2-48.2 GHz band that will greatly serve the public interest. To accommodate these developments, the Commission should license at least some of the LMWS spectrum on a national basis or, alternatively, issue super-regional licenses (consisting of clusters of MTAs), as it did in narrowband PCS.[10/] Also, consistent with spectrum caps in other services, Sky Station proposes a limit of one

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[8/] Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, 3 Comm. Reg. (P&F) 857, 865 (1996).

[9/] The one exception is that fixed services can share with broadcast satellite service feeder links.

[10/] See Section 24.102 of the Rules which provides for nationwide, regional, MTA and BTA narrowband PCS licenses. New FCC Form 415 contains a section for "wide area operations," where the applicant may check "Nationwide" or "Continental United States" -- indicating that national licenses are an option available to the Commission.

pair of 100 MHz bandwidths per licensee. The Millimeter Wave NPRM proposed a 50% spectrum cap. If this were applied to the 47.2 to 48.2 GHz band, this alternative would be acceptable to Sky Station. Finally, a 10-year license term as provided for in PCS and cellular would be appropriate and can be adopted within the scope of the present record. See Millimeter Wave NPRM at para. 25 (proposed ten-year license term). Because these are matters of public record in this proceeding, the Commission should proceed to resolve them in the upcoming Second Report and Order.

II. BASIC SERVICE RULES ISSUES

Many of the service rules issues discussed in this section have been open for comment during the two-year pendency of this proceeding, and the record, therefore, provides an adequate basis on which to resolve these issues in the Second Report and Order. Sky Station firmly believes that the Millimeter Wave Proceeding is a fully appropriate vehicle for establishing a flexible fixed service, including service rules, at least in the 47.2-48.2 GHz frequencies. The reasons for this conviction are set forth below.

A. The Commission Need Not And Should Not Launch A New Proceeding To Adopt LMWS Service Rules.

The Commission's Millimeter Wave NPRM in this proceeding addressed service rule issues, and hence it is free to and should resolve these issues in the Second Report and Order allocating spectrum and resolving the other issues discussed in section I of these Further Comments. In further support of this approach, it should be noted that the Commission initially proposed to incorporate LMWS into Part 21 of its Rules

(Millimeter Wave NPRM at para. 21), which in relevant part, has now become Part 101. Thus, the proposal for treating the LMWS service under Part 101, as revised, is completely consistent with the Millimeter Wave NPRM. Also, the Millimeter Wave NPRM (at para. 23) proposed to model LMWS after LMDS, and LMDS is now included in Part 101. Since the Commission was also uncertain how LMDS services would actually evolve, the fact that there are questions about how LMWS services will evolve in the 47.2-48.2 GHz band is no reason to exclude them from Part 101.

Moreover, the definition of fixed services includes ancillary mobile services within its scope. A number of sections of Part 101 already contemplate mobile transmitters,[11/] and the Part 101 frequency table shows that some bands accommodate mobile service.[12/] For instance, Section 101.139(e) says type acceptance is not needed for low power portable transmitters, showing that such transmitters are allowed in this service. Furthermore, FCC Form 415 provides many transmitter class options, including "Mobile" and "Mobile and Temporary Operational Fixed." It also permits a radius of operations to be provided for a mobile antenna, rather than box coordinates.

The Commission has broadly defined mobile services like CMRS to include ancillary fixed services, even prior to amending its rules to allow for wireless local loop and other fixed services to be offered on a co-primary basis with mobile

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11/ See, e.g., § 101.13(e) (mobile Multiple Address Systems).

12/ See §§ 101.101; 101.107 (table listing frequency tolerance requirements for fixed and mobile stations).

CMRS services.[13/] By analogy, and connected with the Commission's general commitment to flexible uses, fixed services can and should be understood to include ancillary mobile services.

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If the Commission chooses not to resolve all of these issues by adopting service rules in the imminent Second Report and Order, it can still use the Second Report and Order as the occasion to establish blanket waivers for the terrestrial flexible fixed (non-satellite) services, stratospheric fixed services in particular. The Commission recently took a similar approach in the Declaratory Ruling Decision enabling ITFS and MDS licensees to transmit in a digital mode. To expedite the development of wireless cable service, the Commission granted blanket waivers of certain technical rules applicable for an analog environment but incompatible with or unnecessary for a digital environment.[14/]

Only if the Commission adopts neither of these proposed procedures for expediting adoption of LMWS service rules should it resort to launching a new notice of proposed rulemaking on the issues discussed in this section. But if it selects this least

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[13/] Amendment of the Commission's Rules to Permit Flexible Service Offerings in the Commercial Mobile Radio Service, 11 FCC Rcd. 8965, 8968-69 (1996).

[14/] Request for Declaratory Ruling on the Use of Digital Modulation by Multipoint Distribution Service and Instructional Television Fixed Service Stations, 3 Comm. Reg. (P&F) 830, 847, 850-52 (1996).

preferred option, the Commission should issue the notice of proposed rulemaking as soon as possible, and in no event later than the Second Report and Order.[15/]

B. The Commission Should Resolve Certain Service Rule Issues To Accommodate Stratospheric Fixed Services.

Sky Station urges that the Commission resolve the following service rule issues. Although these recommendations are presented here in the context of adapting the Part 101 rules, these recommendations are equally applicable for a stand-alone service governed by its own rules.

(1) The current Part 101 technical requirements (§ 101.21) should be made more flexible and accommodating. For example, the emission and power limitations (§§ 101.111, 101.113) and tower and other requirements, which apply to a terrestrial service (e.g., §§ 101.121, 101.127), should be adjusted either by a rule change in the Second Report and Order or on a case-by-case or blanket-waiver basis.

(2) Frequency coordination is generally required, § 101.103. If the Commission does not authorize national service areas, it should promulgate interference requirements in the Second Report and Order to deal with service area boundaries. A possible model includes the PCS rules (establishment of power flux density limitations at service area boundaries). Sky Station believes the Commission can and should resolve this issue in the Second Report and Order. Failing that, it should do so in an expedited notice of proposed rulemaking.

15/ Possibly the Commission could deal with some of these issues by adopting rules in the Second Report and Order, some by blanket waivers issued in the Second Report and Order and some by a new service rule notice of proposed rulemaking.